

THE THORN PEARS

(*Scolopia* spp.).

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THE genus *Scolopia* was founded by Schreber in 1789, and the following year Loudon established the genus *Phoberos* for the same group of plants. It is under the latter name that the species are described in the "Flora Capensis." The genus is included by Bentham and Hooker under the natural order *Bixineae*, but Engler only includes the genus *Bixa* in this family and places *Scolopia* in the family *Flacourtiaceae*. Gilg in Engler's "Botanische Jahrbüch," vol. 40, p. 481, gives a list of the African species, and describes a new species from the Transvaal, viz. *Scolopia Engleri*. Sim ("Forests and Forest Flora," p. 126) recognized three South African species only, viz. *S. Mundii*, *S. Zeyheri*, and *S. Flanaganii*, and regards *S. Ecklonii* and *E. Gerrardii* as co-specific with *S. Zeyheri*. My examination of herbarium material has led me to recognize *S. Zeyheri* and *S. Ecklonii* as specifically distinct, and to regard *S. Gerrardii* and *S. Engleri* as varieties of *S. Ecklonii*. A very distinct species of the genus, collected at Barberton by Mr. G. Thorncroft, is described here.

The presence or absence of thorns is evidently not a constant character as Sim notes, as specimens sent in by Mr. A. O'Connor from the Woodbush Forest, Transvaal, are stated to be sometimes thorny and sometimes thornless. Though this may be the case, yet my examination of the genus does not confirm Sim's suggestion that *S. Zeyheri* and *S. Ecklonii* are the same species. Both the character of the leaves and the presence or absence of hairs on the inflorescence can be used to distinguish them. In herbarium material thorns were present on some specimens of *S. Zeyheri*, and it is only from information supplied by Mr. O'Connor that we can be certain of the presence of thorns in *S. Ecklonii*, as this character was not observed in any of the herbarium specimens. Mr. O. B. Miller, commenting on specimens collected by him in the Amanzanyana and Buffalo Neck Forests, Mount Frere District, writes: "Yesterday I found a very large old 'red pear' with several sucker shoots growing from the stem at a height of 3 ft. 6 in. from ground-level. So far as I could see the rest of the tree was quite unarmed. It is the first time I have ever observed a thorned tree of this species, except in the seedling stage, when it is always armed. I have since seen another 'red pear' with armed suckers, and the native guard says they are fairly common in this district."

I have not seen authentic specimens of *S. Engleri*, but have examined Transvaal plants which agree with Gilg's description of this species. In some respects it appears to be an intermediate form between *S. Zeyheri* and *S. Ecklonii*, having the pubescent inflorescence of the former and the leaves of the latter, but the specimens are so similar to *S. Ecklonii* and the distribution limited to the bushveld that I prefer keeping it as a variety of this species. I have also decided to place *S. Gerrardii* as a variety of *S. Ecklonii*, as though while the specimens hitherto placed under the former species have a distinctive appearance owing to the size of the leaves, yet the examination of a large series of specimens of *S. Ecklonii* indicated that this species merges into *S. Gerrardii*.

I have to thank the Chief Conservator of Forests, Dr. Schönland, the Directors of the Transvaal and South African Museums, for the loan of the material in their respective herbaria.

KEY TO SPECIES.

Inflorescence a dense cylindric spike about 1 cm. in diameter.....	<i>Thorncroftii</i> .
Inflorescence a lax raceme.	
Leaves small, usually about 2 cm. long and 1 cm. broad; fruit minutely pubescent	<i>Flanaganii</i> .
Leaves usually over 2 cm. long and 1 cm. broad: fruit glabrous.	
Inflorescence pubescent.	
Leaves usually ovate in outline.....	<i>Zeyheri</i> .
Leaves usually obovate or oblanceolate in outline (Transvaal species)	<i>Ecklonii</i> , var. <i>Engleri</i> .
Inflorescence glabrous.	
Leaves usually abruptly acuminate and distinctly serrated.....	<i>Mundii</i> .
Leaves not abruptly acuminate, entire or sometimes remotely serrated.....	<i>Ecklonii</i> .

S. Thorncroftii, Phillips.

Arbor 6-7 mm. altus. *Rami* glabri. *Folia* 5.5-9.5 cm. longa, lanceolata vel obovata, aliquando subacuminata, apice obtusa, glabra. *Inflorescentia* densa, cylindrica, circa 1 cm. lata, pubescentia. *Petala* 1.25 mm. longa, linearia, apice acuta. *Filamenta* 6 mm. longa. *Ovarium* 1.5 mm. latum, globosum; stylus 2 mm. longus, apice paullo bifidus.

TRANSVAAL.—Barberton Div.: Barberton, 2900 ft., flowers white, *Thorncroft* 811, and in *Natal Herbarium* 14245.

Tree 20 ft. high. *Branches* glabrous, with the epidermis peeling off in membranous flakes. *Leaves* petioled; petioles 1-1.5 cm. long; lamina 4.5-8 cm. long, lanceolate or obovate, sometimes subacuminata, obtuse, entire, sometimes with wavy margins and with the veining distinct above and beneath, glabrous. *Inflorescence* in dense cylindric axillary spikes about 1 cm. in diameter. *Axis* pubescent. *Flowers* subsessile. *Sepals* 1.5 mm. long, ovate, obtuse, ciliate, pubescent. *Petals* 1.25 mm. long, linear, acute. *Glands* 0.5 mm. long, arranged in a continuous row on the receptacle. *Stamens* numerous; filaments 6 mm. long, surrounded at the base with long hairs; anthers ovate in outline, somewhat apiculate. *Ovary* 1.5 mm. in diameter, globose; style 2 mm. long, subterete, faintly bilobed at the apex.

This is a very distinct species and easily recognized by the dense cylindric inflorescence.

S. Flanaganii (Sim. "Forest and Forest Flora," p. 127, Pl. III.)

A small tree. *Branches* glabrous with raised lenticels. *Leaves* subsessile, 1.1-3 cm. long, 0.5-1.5 cm. broad, elliptic, rarely obovate, obtuse, sparsely serrated on the upper half, with distinct veining, glabrous. *Flowers* not seen. *Fruit* 0.5 mm. in diameter, subglobose, finely pubescent.—*Xylosma Flanaganii*, Bolus, in "Journ. Bot.," Jan., 1896¹.

CAPE PROVINCE.—Kingwilliamstown Div.: Kingwilliamstown, *Sim* 2571, and in *Natal Gort. Herb.* 8616.

This species is easily distinguished from the rest of the genus by the sessile leaves and the pubescent fruits.

S. Zeyheri [Szyszzy in Pl. Rehmann (1887), 19].

A thorny shrub 8-10 ft. high (ex *Galpin*). *Youngest branches* minutely pubescent or glabrous, sometimes armed with spines 1.5-17 cm. long. *Leaves* petioled; petioles 0.5-1.5 cm. long; lamina 1.3-7 cm. long (usually 2.5-4 cm. long), 1-5 cm. broad (usually 2-3 cm. broad), ovate, ovate-elliptic, elliptic, elliptic-lanceolate, or obovate, more rarely subrotund or orbicordate, obtuse or rounded at the apex, more rarely subacuminata or retuse, rounded or cuneate at the base, with entire margins, more rarely subcrenate, with the veining distinct beneath, glabrous. *Inflorescence* an axillary raceme, 2.8-6.5 cm. long, usually lax, but sometimes more or less dense, though never broadly cylindric. *Axis* of inflorescence and pedicels finely but densely pubescent. *Sepals* 0.75-2 mm. long, 0.75-1.5 mm. broad, ovate, oblong, elliptic or suborbicular, obtuse or acute

sometimes subacuminate, usually shortly ciliate, pubescent without. *Petals* when present 1 mm. long, 0.75 mm. broad, ovate. *Glands* 0.25–0.5 mm. long, arranged in a continuous row on the receptacle. *Stamens* numerous; filaments 1.5–3 mm. long, surrounded at the base by long hairs; anthers 0.5–1 mm. long, ovate, or suborbicular in outline. *Ovary* 0.5–1.25 mm. in diameter, globose or ellipsoid, glabrous; style 1.5–2 mm. long, subterete, faintly bilobed at the apex (sometimes each lobe again faintly lobed). *Fruit* (mature?) 5 mm. in diameter, globose, glabrous, tipped with the persistent style.—*Sim*, “*Forest and Forest Flora*,” p. 126, pl. ii; *Gilg in Engl. “Bot. Jahrb.”* 40, p. 481; *Phoberos Zeyheri*, *Arn.*, “*Flora Capensis*,” I, 68.

CAPE PROVINCE.—Bathurst Div.: Port Alfred, *Schlechter* 2733. Stutterheim Div. Katberg, *MacOwan in Natal Govt. Herb.* 1113. Komgha Div.: In woods near Komgha, 2000 ft., *Flanagan*, 863. East London Div.: East London, *Wood in Herb. Galpin* 2828. Somerset East Div.: Zuurberg, *Holland* 279; banks of Klein Visch River, near Somerset East, *MacOwan* 808; woods on slopes of Boschberg, 3000 ft., *MacOwan* 1324. Queenstown Div.: Ridges at Finchams Nek, 4000 ft., *Galpin* 1822.

EAST GRIQUALAND.—Maclear Div.: In wooded kloofs, Pot River Berg, 5500 ft., *Galpin* 6830.

NATAL.—Near Sinkwasi River, 500 ft., wood, Lundies Hill, *Wood* 10170, and *in Natal Govt. Herb.* 10780.

S. Mundii (Warb. in Engl. and Prantl. Pflanzenfam. iii, 6a, 29).

Branches glabrous. *Leaves* petioled; petioles 0.5–1 cm. long; lamina 1.5–7.5 cm. long, 0.7–4 cm. broad (usually 4–5 cm. long and about 2 cm. broad), abruptly acuminate, rarely not acuminate, acute or subacute, more rarely rounded or obtuse, cuneate at the base, with sharply serrated margins, veining distinct beneath, glabrous. *Inflorescence* a lax axillary raceme, 2–3 cm. long. *Axis* of inflorescence and pedicels quite glabrous. *Sepals* 1.5–2.5 mm. long, 1.5–2.5 mm. broad, ovate or subrotund, sometimes subacuminate, acute, obtuse or sometimes rounded at the apex, glabrous. *Glands* 0.5–1 mm. long, usually quadrate in outline, somewhat fleshy and arranged in a continuous row on the receptacle. *Stamens* numerous; filaments 3.5–5 mm. long, surrounded at the base with long hairs; anthers 0.75–1 mm. long, oblong, elliptic or orbicular in outline, usually apiculate at the apex. *Ovary* 1–3 mm. in diameter, globose or ellipsoid, glabrous; style 2.5–3 mm. long, subterete, divided at the apex into two short lobes, sometimes each lobe again faintly lobed. *Fruit* about 1 cm. in diameter, globose, glabrous.—*Sim*, “*Forests and Forest Flora*,” p. 126, pl. i; *Gilg in Engl. “Bot. Jahrb.”* 40, p. 481; *Phoberos Mundtii*, *Arn.*, “*Flora Capensis*,” I, 68.

CAPE PROVINCE.—Cape Div.: Kirstenbosch, in wood, Table Mountain, *Zeyher*. Knysna Div.: Grootkops River, Concordia, *Keet in Herb. Forest Dept.* 2373. Port Elizabeth Div.: Van Staadens, *Zeyher* 3785. Albany Div.: Woods about Grahamstown, 2000 ft., *MacOwan* 957, and *in Natal Govt. Herb.* 226. Komgha Div.: In woods at Prospect Farm Komgha, 2100 ft., *Flanagan* 62. Queenstown Div.: Lesseyton Nek, near Queenstown, 4000 ft., *Galpin* 2146; mountain top, Gwatyn Farm, 5400 ft., *Galpin* 8295.

TRANSKEI.—Tembuland, towards reservoir, near Cala, *Rouffe* 204; Pondoland, Engcobo Div.: Manina Forest, *Zahn in Herb. Forest Dept.* 2040; Amanzaminyama Forest, Mount Frere Dist., *Miller in Herb. Forest Dept.*, 3208, 3223.

NATAL.—Polela Div.: Polela, Drakensbergen, 6000–7000 ft., *Evans* 624, and *in Natal Govt. Herb.* 7407.

ZULULAND.—Qudeni Forest, 6000 ft., *Davis* 122, and *in Natal Govt. Herb.* 8807.

TRANSVAAL.—Ermelo Div.: Nooitgedacht, *Pott* 5097, and *in Herb. Transvaal Mus.* 14932.

BASUTOLAND.—Thaba-Bosin Div. : Banks of Mohale River, *Jacottet in Herb. Dieterlen* 1062. Maseru Div. : Matukeng, slopes of Qeme Mountain, *Dieterlen* 852

A tree 15–20 ft. high (*Evans*). A tree 10 ft. high ; drupe yellow (*Galpin*) ; Sesuto name “Moopa-Koma.”

S. Ecklonii [Szyszy, Pl. Rehmann (1887)].

Branches glabrous with raised lenticels *Leaves* petioled ; petioles 0·5–1 cm. long ; lamina 2·5–11 cm. long, 0·7–3·6 cm. broad, mostly elliptic-lanceolate, more rarely lanceolate, oblanceolate or obovate, rounded or obtuse at the apex, more rarely subacute, cuneate at the base, with entire margins, rarely with a few teeth, with distinct veining, glabrous. *Inflorescence* a lax axillary raceme. *Axis* and pedicels quite glabrous. *Sepals* 1–2 mm. long, 0·75–1 mm. broad, ovate or oblong, obtuse, acute, or subacute, labrous. *Petals* when present 1–1·5 mm. long, linear or oblong. *Glands* forming a rim on the receptacle. *Stamens* numerous ; filaments 2–5 mm. long, surrounded at the base with long hairs ; anthers oblong or ovate in outline. *Ovary* 1·5 mm. in diameter, subglobose ; style 1·5–3 mm. long, faintly or distinctly 2–4-lobed at the apex. *Fruit* 4·5 mm. in diameter, globose.—*Sim*, “*Forests and Forest Flora*,” p. 127 ; *Gilg in Engl.* “*Bot. Jahrb.*,” 40, p. 481 ; *Phoberos Ecklonii*, *Arn.*, “*Flora Capensis*,” I, 68.

CAPE PROVINCE. Uitenhage Div. : Van Staadens Mountains, *Zeyher* 782. Albany Div. : In woods near Grahamstown, *MacOwan* 1324.

NATAL.—Near Tugela River, 500 ft., *Wood* 3951, and *in Natal Gort. Herb* 4578.

ZULULAND.—Qudeni Forest, 6000 ft., *Davis* 99, and *in Natal Gort. Herb.* 8806 ; swamp, Umhlatuzi Forest, *Ballenden in Herb. Forest Dept.* 2559.

TRANSVAAL.—Pietersburg Div. : Potatobosch, Woodbush Forest, 4900 ft., *Botha in Herb. Forest Dept.* 2132 ; *O'Connor in Herb. Forest Dept.* 2009.

Var. **Gerrardii**, Phillips.

Leaves up to 8 cm. long and 5 cm. broad, with usually undulate margins and sometimes remotely serrated.—*Scolopia Gerrardii*, *Harr.*, “*Flora Capensis*,” II, 548.

NATAL.—Westville, near Durban, 4000–5000 ft., *Wood* 8597, and *in Natal Gort. Herb.* 9320 ; Sydenham, 300–400 ft., *Wood* 11402.

PONDOLAND. Engcobo Div. : Manina Forest, *Zahn in Herb. Forest Dept.* 2041.

Var. **Engleri**, Phillips.

Agrees with the type, but the inflorescence is slightly pubescent.—*S. Engleri*, *Gilg in Engl.* “*Bot. Jahrb.*,” 40, 481.

TRANSVAAL.—Derdepoort, *Miss Leendertz* 190. Rustenburg Div. : Rustenburg, *Miss Leendertz* 9773. Pretoria Div. : Betfontein, *Theiler in Herb. Transvaal Museum* 12365 ; Kaalplaats, *Mogg in Gort. Herb.* 16289.